



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/788,407	02/21/2001	Michael A. Brown	NC 80,124	5879

26384 7590 03/11/2004

NAVAL RESEARCH LABORATORY  
ASSOCIATE COUNSEL (PATENTS)  
CODE 1008.2  
4555 OVERLOOK AVENUE, S.W.  
WASHINGTON, DC 20375-5320

EXAMINER

A, PHI DIEU TRAN

ART UNIT

PAPER NUMBER

3637

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application N .

09/788,407

Applicant(s)

BROWN ET AL.

Examiner

Phi D A

Art Unit

3637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7,8,16-18 and 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7,8,16-18 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/1/03 has been entered.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,3-5,7-8,16-18, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vyvyan et al (3564789) in view of Blagg (3494593).

1. Vyvyan et al (figure 1) shows an elongated truss boom having a plurality of longerons (20, 22, 18, 12) arranged parallel to and equidistant from a longitudinal axis of the truss boom forming a polygonal cross section normal to the axis, a plurality of fixed battens (28, 26), a plurality of moveable battens (31, 30), wherein the fixed battens and the moveable battens being coupled to the longerons to form a plurality of polygonal frame members which are located in a series of planes normal to the longitudinal axis, a first and second longerons of the plurality of longerons are interconnected with at least one of the fixed battens to form a first rigid ladder

Art Unit: 3637

shaped structure, a third and a fourth longerons of the plurality of longerons are interconnected with at least one other of the fixed battens to form a second rigid ladder shaped structure opposing the first rigid ladder shaped structure, the first rigid ladder shaped structure being movably connected by moveable battens to the second rigid ladder shaped structure, the moveable battens are closed and the ladder shaped structures are together when the truss boom is flattened the four longerons being substantially coplanar to permit compact stowing, a plurality of diagonals (38, 36) interconnect adjacent polygonal frame members, the longerons having a corrugated cross section (154 together with 152, figure 9, with curve and flat surface), the corrugated cross section is "L" shaped (figure 9 ), a self actuation means (the spring material, col 2 lines 15-21) which biases the moveably coupled battens and the truss boom in an expanded position, a mechanically actuated locking means (col 4 lines 31-34) which releases the truss boom for stowage and locks the deployed truss boom in an expanded configuration, a drum for stowing the flattened truss boom by rolling the flattened truss boom into a coil around the drum (col 3 line 49), instrumentation (230, 228) attached to fixed battens extending above and below the stowed truss boom so that upon elongating the boom the instrumentation is located at predetermined points along the boom (figure 13 show instrumentation attached at fixed battens at predetermined points on the longerons), the longerons having a flat ribbon shape when the boom is stowed and a corrugated cross-sectional shape when the boom is deployed.

Vyvyan et al does not show the first and second longerons being spaced apart from each other less than the third and fourth longerons being spaced apart from each so that the first ladder shaped structure nests between the third and fourth longerons of the second ladder shaped structure.

Art Unit: 3637

Vyvyan et al discloses the boom being rectangular in shape.

Blagg shows longerons connected battens of different dimensions to enable the nesting of a first ladder shape structure (14, figure 3A) within a second ladder shape structure (36, figure 3A) to enable nesting of the ladder shaped structure for compact storing.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vyvyan et al to show the first and second longerons being spaced apart from each other less than the third and fourth longerons being spaced apart from each so that the first ladder shaped structure nests between the third and fourth longerons of the second ladder shaped structure because it would enable nesting of the ladder shaped structure for compact storing as taught by Blagg.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1, 3-5, 7-8, 16-18, 21 has been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

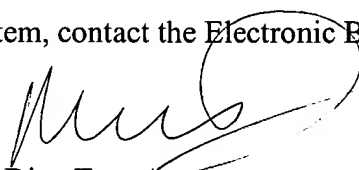
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art shows different truss boom designs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phi D A whose telephone number is 703-306-9136. The examiner can normally be reached on Monday-Thursday.

Art Unit: 3637

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on 703-308-2486. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Phi Dieu Tran A  
March 8, 2004